



Sanctuary Research: Goals and Strategies for Next 5 Years

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MBNMS Research Program

Mission:

Develop and interpret scientific information to better understand Sanctuary ecosystems and inform resource management decisions.





4 Goals of MBNMS Research

1. **Facilitate** collaboration and coordination between research groups in the MBNMS region.
2. **Characterize** Sanctuary resources, and assess "Sanctuary health" with long-term monitoring programs.
3. **Inform** resource management issues with best science available.
4. **Interpret** research information for decision- and policy-makers and including the public.



Goal 1. Facilitate research collaboration and coordination.

- Support and promote the Research Activities Panel.
- Participate in regional/national science and resource management initiatives.
- Enhance NOAA vessel and aircraft capability and support.



Goal 2. Characterization and Long Term Monitoring

- Implement SIMoN program:
 - Monitor target species, resources, key processes, and physical parameters
 - Paleo-ecological and archaeological studies to determine historic conditions.
 - Identify, locate, analyze, archive and, when possible, build upon historic data sets
 - Characterize water flow, erosion processes, and monitor key biological communities in Elkhorn Slough
 - Export SIMoN model to other Sanctuaries.



Goal 2. Characterization and Long Term Monitoring (continued)

- Link coastal health to ocean productivity.
- Participate in regional cabled observatory development.
- Characterize cultural resources.



Goal 3. Research on resource management issues

- Assess, quantify extractive human impacts
- Assess, quantify non-extractive human use impacts (e.g., trampling rocky shores).
- Assess, quantify effectiveness of regional marine reserves at the ecosystem level.
- Understand transport and sinks of pollution (particularly in sediments, water, and through the food web).
- Assess impacts of undersea cables.
- Improve rapid response capacity to document impacts of specific events



Goal 4. Interpreting Research

- Post research findings on web site
- Update the MBNMS Site Characterization (available on the Sanctuary web page)
- Enhance & promote Ecosystem Observations and Sanctuary Currents
- Streamline institutional research permits process



Role of the MBNMS in Regional Research

- Coordinate regional research and monitoring - add value to existing programs and help avoid duplicative efforts.
- Provide funding, logistic support; obtain outside funding.
- Staff the program with knowledgeable scientists, capable in conducting as well as interpreting research.
- Integrate research with Sanctuary Education, Conservation and Resource Protection Programs.
- Integrate regional research with national program.



Conclusions

- Central role for MBNMS to integrate marine research in resource management decisions.
- Central role for MBNMS to nurture and promote marine conservation science
- Lead role for SIMoN to characterize Sanctuary resources, assess trends, and share information.
- Support growing research needs with MBNMS research vessel and remotely operated vehicle